

Sheltering In Place

Sheltering

In the event of a biological or chemical weapons event or accident, there may not be sufficient time to evacuate affected areas. Emergency Managers are promoting the "Shelter In Place" principle under these circumstances. This technique isn't new and has been used successfully in many countries around the globe. As with any emergency procedure, pre-planning is essential and requires some material purchases. Following this section are some excerpts from various related articles with tips for responding to a threat or evacuation order and links to other sites with more information.

Required Materials:

- 500 sq. ft. of 2, 3 or 4 mil Plastic Sheeting;
- 2 rolls Duct Tape;
- Bath Size Cloth Towels;
- Battery powered radio or TV for official emergency broadcasts & lantern(s) or flashlights with spare batteries;
- Important prescription medications;

Optional Materials:

- Sleeping bag(s) or blanket(s) & Coat(s);
- Books, games or other diversions;
- Cordless or Cellular Telephone;
- Drinking Water, 1 gal / person / day;
- 72 hour kit for each person;
- Port-A-Potty made of a 5 gallon bucket lined with garbage bags. Use RV/holding tank chemicals or a pail of dirt to cover wastes.
- Plastic or rubber Weather Stripping;

*** NOTE: The "Required Materials" are minimums and should be expanded based on your plan!

Planning:

- Locate interior, second story or higher room(s) with as few vents, windows and doors as possible. DO NOT use basements or other underground enclosures as many agents are heavier than air and settle into lower levels;
- Store above materials in each safe room in unlocked closet(s);
- Determine maximum occupancy by multiplying the room's width by it's length and dividing by thirty-six. This is the number of people that can remain "sealed in" for up to two hours. (A 360 sq. ft. room can accommodate ten people for 1 to 2 hours.)
- Precut plastic sheathing 2 inches wider than the dimensions of each window, vent, door, electrical outlets, phone jacks or other opening that leads to the outside and mark each sheet for quick installation;
- Install weather stripping around door(s) and window(s) where possible;
- Hold a meeting with all members of the household or employees of your business. Discuss the location of materials and equipment, installation and emergency notification procedures to be used, and hold regular drills to practice the plan;

When a Warning is issued:

- Immediately gather any supplies or materials stored outside the room(s);
- Close and lock all exterior doors and windows, close all drapes and curtains;
- Turn off all air handling systems such as furnaces, air conditioners & exchangers and close all flues, dampers and vent covers;
- Gather all occupants, enter the room(s) and close and lock the door behind the last person;
- Soak bath towels in water and jam into openings under doors or in open vents;
- Install pre-cut plastic sheathing by taping around the edges of windows, doors, electric outlets, phone jacks, cable TV boxes, heat/ac vents and any other opening to the exterior to form a seal;

- Turn on your radio, tune in your local "official news" station and listen for further instructions;

When the "all clear" is signaled, or it is otherwise safe to exit the room(s), carefully remove and dispose of the tape, the bath towels and the plastic sheathing. Exercise care when removing and disposing of these materials in order to minimize contamination of your safe room(s) from residual agents. When possible, hire a disaster cleanup company or other professional decontamination service to insure the premises is safe for occupancy.

EVACUATION

- Authorities may decide to evacuate an area for your protection. It is important to stay calm, listen carefully and follow all instructions;
- If you are told to evacuate, listen to your radio to make sure the evacuation order applies to you and to understand how much time you have to pack essentials. Warning of approaching hazards may be as little as 5 minutes to as long as several hours;
- If you are told to evacuate immediately;
 - Close and lock your windows.
 - Shut off all vent, furnaces, air conditioning units, and air exchange units.
 - Lock the doors.
 - Move quickly and calmly.
 - You do not need to turn off your refrigerator or freezer, but you should turn off all other appliances and lights before locking your home as you leave.
- Check on neighbors to make sure they have been notified, and offer help to those with disabilities or other special needs;
- Take only one car and carpal to the evacuation site;
- Close your car windows and air vents and turn off the heater or air conditioner;
- Do not take Shortcuts because a shortcut may put you in the path of danger. For your safety, follow the exact route you are told to take.

A few words about "GAS MASKS"

Many people believe that a gas mask will save their lives if a disaster ever occurred. After the September 11th attacks, many surplus stores reported that gas masks "were flying off the shelves" as customers bought anything and everything that might protect against an airborne agent. Unfortunately, many folks forgot why military surplus becomes surplus in the first place. These items are usually not in good working order and generally do not have repair parts or replacement filters or cartridges available.

Businesses and industries that work with chemical or biological agents are stringently regulated. Employees must take classes to learn how to use a gas mask. Masks must fit snugly around the nose and mouth, facial hair is generally prohibited because the mask will not seal against the skin, and the service life of the mask is limited. Filters and cartridges must be replaced at regular intervals and masks don't protect other body parts such as the skin or, in some types, the eyes.

If you insist on obtaining a gas mask, buy only new masks from reputable dealers. Check into companies that manufacture masks or contact retailers of chemical or mine safety equipment. Most masks are designed for specific purposes and there are few "one type fits all" masks available to the public, so, do your research before spending your money. Also, plan on spending some big bucks because you may need to purchase several different filters or cartridges depending on the agent you want to protect against.

Excerpt from: Tip Sheet, October 2001, United States Postal Inspection Service

The Federal Bureau of Investigation (FBI) has been designated as the lead Federal Agency for crisis management in all acts of terrorism and uses or threats of Weapons of Mass Destruction (WMD).

What Should I do if I Receive an Anthrax Threat by Mail?

- Double bag the letter or package in zipper-type or zip-lock type plastic bags using latex gloves, if possible, and a particulate mask;
- Wash your hands with soap and water;
- Notify your immediate supervisor, local police, Postal Inspectors and the

FBI. The FBI will arrange to collect the letter or the threat and assess the threat situation;

- Notify the local, county, and state health departments;
- Notify the state emergency manager;
- Ensure that all persons who have touched the letter wash their hands with soap and water;
- List all persons who have touched the letter and/or envelope with locating and contact information and provide the list to appropriate people;
- Place all items worn at the time in plastic bags and keep them wherever you change your clothes and have them available for law enforcement, should they request them;
- Shower with soap & water;
- Take medication until otherwise instructed or it runs out;
- Notify Center for Disease Control (CDC) Emergency Response at 770-488-7100 for any questions or if you require further information.

What constitutes a "suspicious parcel?"

Some typical characteristics Postal Inspectors have detected over the years, which ought to trigger suspicion, include parcels that may:

- Be unexpected or from someone unfamiliar to you;
- Be addressed to someone no longer with your organization or otherwise outdated (e.g., improper title);
- Bear no return address, or one that can't be verified as legitimate;
- Be of unusual weight, given its size, or be lopsided;
- Be marked with restrictive endorsements, such as "Personal" or "Confidential";
- Exhibit protruding wires, strange odors or stains;
- Exhibit a city or state in the postmark that doesn't match the return address.

What should I do if I've received a suspicious parcel in the mail?

- Do not try to open the parcel, as they are usually designed to withstand handling while in the mail, and to explode when opened or when an item is removed;
- Isolate the parcel;
- Evacuate the immediate area;
- Call a Postal Inspector to report that you've received a parcel in the mail that may be a bomb.

What is Anthrax?

Anthrax is a bacterial, zoonotic disease caused by *Bacillus Anthracis*, a rod-shaped, gram positive, sporulating organism with the spores constituting the usual infective form. Anthrax occurs in domesticated and wild animals, primarily herbivores, including goats, sheep, cattle, horses, and deer, but other animals may be infected.

The skin form of the human disease may be contracted by handling contaminated hair, wool, hides, flesh, blood or excrement of infected animals and from manufactured products such as bone meal. Infection is introduced through scratches or abrasions of the skin, wounds, inhalation of spores, eating insufficiently cooked infected meat or flies. The spores are very stable and may remain viable for many years in soil and water. They will resist sunlight for varying periods.

What Are the Symptoms and Effects of Anthrax?

After an incubation period of 1-7 days, the onset of inhalation anthrax is gradual. Possible symptoms include:

- fever;
- malaise;
- fatigue;
- cough;
- mild chest discomfort followed by severe respiratory distress.

This mild illness can progress rapidly to respiratory distress and shock in 2-4 days followed by a range of more severe symptoms including difficulty breathing, exhaustion, tachycardia, cyanosis and terminal shock can occur. Death usually occurs within 24 hours of respiratory distress onset.

What Are the Clinical Features of Anthrax?

Anthrax is an acute bacterial infection of the skin, lungs, or gastrointestinal tract. Infection occurs most commonly via the skin route and only very rarely via the others.

The cutaneous or skin form occurs most frequently on the hands and forearms of persons working with infected livestock or contaminated animal products and represents 95% of cases of human anthrax. It is initially characterized by a papule which progresses to a fluid filled blister with swelling at the site of infection. The scab that typically forms over the lesion can be black as coal, hence the name anthrax, Greek for coal. With treatment, the case fatality rate should be less than 1% among cutaneous cases. The fatality rate for untreated inhalation or intestinal anthrax is over 90%.

The inhalation form is contracted by inhalation of the spores, occurs mainly among workers handling infected animal hides, wool, and furs. Under natural conditions, inhalation anthrax is exceedingly rare, with only 18 cases having been reported in the United States in the 20th century.

What Is the Treatment for Anthrax?

Treatment with antibiotics beginning one day after exposure to a lethal aerosol challenge with anthrax spores (8,000 - 22,000 spores) has been shown to provide significant protection against death in monkeys, especially when combined with active immunization. Penicillin, doxycycline, ciprofloxacin, are all effective against most strains of B anthracis. Penicillin is the drug of choice for naturally occurring anthrax. If untreated, inhalation anthrax is fatal. For post-exposure prophylaxis the administration of antibiotics should be continued for at least 4 weeks in those exposed and if available, those exposed should receive 3 doses of vaccine before antibiotics are discontinued.

A vaccine is available and consists of a series of 6 doses over 18 months with yearly boosters. The first vaccine of the series must be given at least 6 weeks before exposure to the disease. This vaccine, while known to protect against anthrax acquired through the skin, is also believed to be effective against inhaled spores. While a vaccine does exist for anthrax, its availability to the general public is not widespread.

Effective decontamination can be accomplished by boiling contaminated articles in water for 30 minutes or longer and using some of the common disinfectants. Chlorine is effective in destroying spores and vegetative cells. Remember, anthrax spores are stable, able to resist sunlight for several hours and able to remain alive in soil and water for years.

Additional Resources:

The Federal Bureau of Investigation (FBI) is the lead Federal agency for crisis management for all acts of terrorism and in all threats or incidents of WMD. The FBI will coordinate the Federal Government's efforts to prepare the nation's response community for threats involving Weapons of Mass Destruction (WMD).

The National Domestic Preparedness Office (NDPO) works in conjunction with other Federal, State and Local Crisis Managers specific to WMD and will perform an Interagency Threat Assessment and deploy a Domestic Emergency Support Team (DEST) if a threat is received. To contact them call: 202-324-0259, FBI Special Information Operations Center, SIOC.

The Defense Threat Reduction Agency (DTRA) is a new agency that is charged with reducing the present threat to the U.S. and its allies from WMD and preventing future threats. DTRA focuses Department of Defense efforts to prepare for and respond to chemical or biological attacks. The CB Hotline is 1-800-424-8802. The web site is <http://www.dtra.mil/>.

The Centers for Disease Control and Prevention (CDC) is responsible for coordinating all public health and would be contacted at the Emergency Preparedness and Response Branch, National Center for

Environmental Health to report an incident at 770-488-7100. Their web site is <http://www.bt.cdc.gov/index.asp>.